SONY

Digital Betacam Family 2005/2006

Digital BETACAM

www.sonybiz.net/digitalbetacam

Product line-up

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Discover the quality and simplicity of Digital Betacam.

Digital Betacam was the first recording format to bring the benefits of digital production to the wider programme making community. Since its introduction, Digital Betacam has become the established favourite for standard definition programme production where only the ultimate picture quality and sound will suffice.

The high quality performance of Digital Betacam, combined with its simplicity of operation is just one reason why many broadcasters around the world have chosen Digital Betacam as their “in-house” production format. Recognising the continued popularity of Digital Betacam around the world, Sony has added a new third generation camcorder to the Digital Betacam line-up.

With a comprehensive range of models and built-in capability to replay Betacam, Betacam SP, Betacam SX and MPEG IMX cassettes, Digital Betacam is the ideal format to fully integrate your existing operations into a digital environment.

Camcorder

DVW-970P

The DVW-970P is the latest addition to the Digital Betacam line-up. This third generation camcorder combines Power HAD™ EX CCD performance with high precision 14 bit A/D conversion to deliver reduced noise and smear and excellent sensitivity. Progressive recording at 25 frames per second has been added, and features such as slow shutter mode, interval recording and picture cache operation are also provided. Use of the latest technology has reduced size, power consumption and acoustic noise compared with previous generation Digital Betacam camcorders.

FEATURES

- 3-chip 2/3-inch Power HAD EX™ CCDs
- Digital Betacam picture quality
- Switchable between 50i and 25P, and 4:3 and 16:9 modes
- Long recording time of up to 40 minutes on a single cassette
- 14 bit A/D conversion
- High sensitivity of F11 at 2000 lux
- Low smear level of –145dB (typical)
- Excellent signal-to-noise ratio of 63dB
- Turbo gain up to +48dB
- TruEye™ processing for improved reproduction of natural colours
- Slow shutter mode for shooting in extremely low-light conditions
- Selectable gamma table including film-like gamma
- Auto Trace White (ATW) system
- Triple skin tone detail control
- Multi-matrix feature
- Dial in colour temperature
- Dual optical filters
- Picture cache for capturing the (up to) 8 seconds of material before the record button is pressed (CBK-MB01 option required)
- SDI output (CBK-SD01 option required)
- 4 channels of 20 bit digital audio
- Stereo audio output
- Slot for WRR-855 series wireless microphone receiver
- Memory Stick slot for storage and recall of set-up parameters
- Remote control using optional RM-B150 or RM-B750 controllers
- Battery remaining display in viewfinder
- Rugged and ergonomic design
- Essence Mark recording for rapid cue up during editing
- UMID (Unique Material Identifier) recording for picture cataloguing and searching

Sony Services

Optional Accessories

CBK-SD01
SDI Output Board

CBK-MB01
Picture Cache Board

BKW-401
Viewfinder Rotation bracket

RM-B150
Remote Control Unit

RM-B750
Remote Control Unit

AC-DN10
AC Adapter

AC-DN2B
AC Adapter

BP-GL65/GL95
Lithium Ion Battery Pack

BC-L70
Battery Charger

BC-M150
Battery Charger

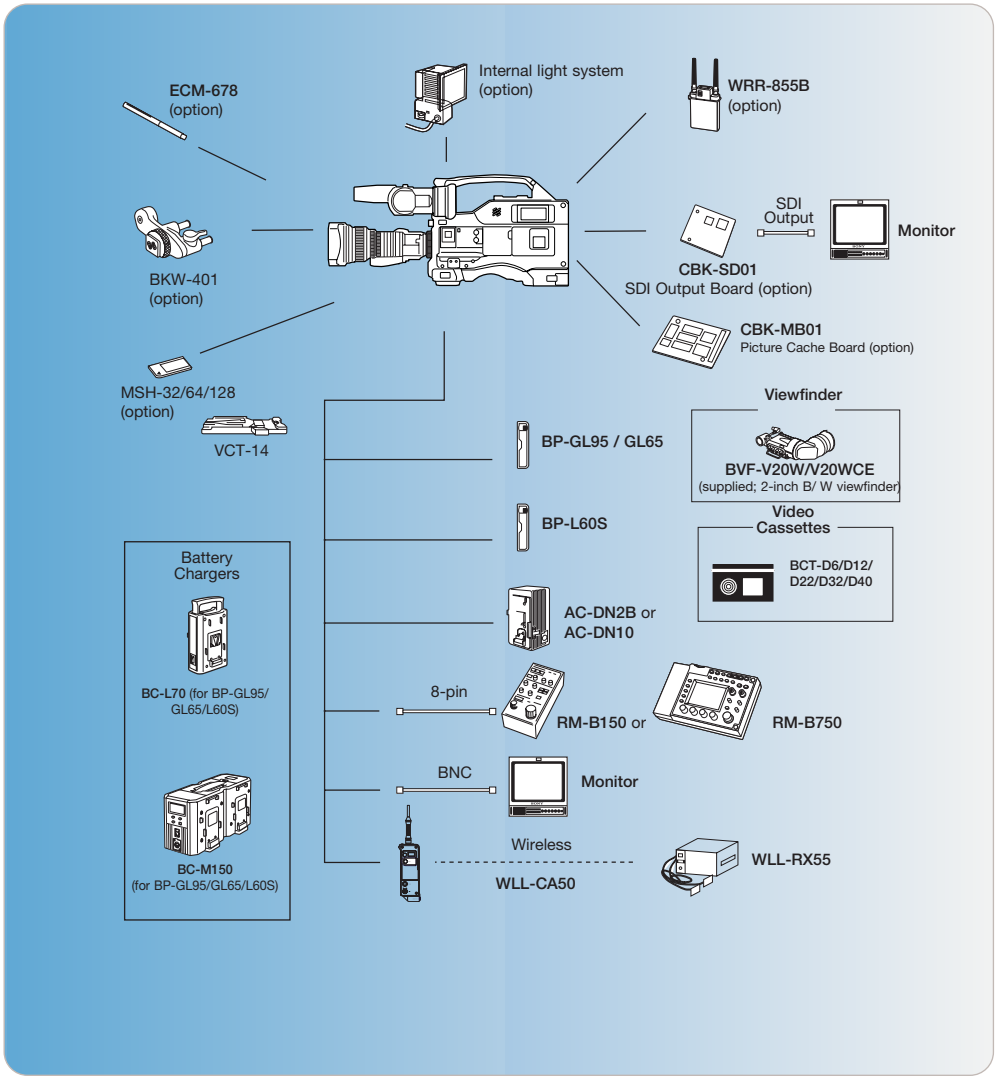
VCT-14
Tripod Adapter

BCT-D6/D12/ D22/D32/D40
Digital Betacam Cassettes

MSH-32/64/128
Memory Stick media

WRR-855B
Wireless Microphone Receiver
(Shown here with a BTA-801 Camera adapter for rear Mounting to camcorder)

System configuration



WRR-862B
Dual Diversity Microphone Receiver
(Adaptor required)

WLL-CA50
Wireless Camera Transmitter

WLL-RX55
Wireless Camera Receiver

ECM-670/672/678
Shotgun-type Electret Condenser Microphones

Not pictured here:

1-547-341-12 Fog-proof Filter
A-8262-537-A Viewfinder Eye-piece (high magnification)
A-8262-538-A Viewfinder Eye-piece (low magnification)
A-8267-737-A Viewfinder Eye-piece (standard magnification with special compensation for aberrations)
A-8314-798-A Viewfinder Eye-Piece (high performance, x3)
X-3608-271-1 Standard Viewfinder Lens
A-8278-057-A Mounting Bracket for WRR-862B
LC-DN7 Hard Carrying Case

Studio Recorders

DVW-M2000P

Records: Digital BETACAM

Replays: BETACAM SX, MPEG IMX, Digital BETACAM, BETACAM, BETACAM SP

DVW-2000P

Records: Digital BETACAM

Replays: Digital BETACAM

The DVW-M2000P is a Digital Betacam editing VTR with Betacam, Betacam SP, Betacam SX and MPEG IMX playback. It combines superb picture quality with excellent multi-generation editing capability. The DVW-M2000P records 4 channels of digital audio at 20-bit resolution and has powerful editing features such as Pre-read, Dynamic Tracking (DT) and insert/assemble editing to zero frame accuracy. Recording and playback of UMID (Unique Material Identifier) is also a standard feature, for productions where the rapid identification and access to material is required. Many broadcasters use Digital Betacam VTRs today for play-out of content from Flexicart and Library Management (LMS) systems. The DVW M2000P is ideal for this application, where the requirement for rugged, reliable 24 hour-per-day operation is mandatory.

The DVW-2000P offers the same features as the DVW-M2000P but without Betacam, Betacam SP, Betacam SX and MPEG IMX playback.

DVW-M2000P

- 4:2:2 component digital VTR
- 625/50 operation
- Digital Betacam recording and playback
- Playback of Betacam, Betacam SP, Betacam SX and MPEG IMX cassettes
- 4 channels of 20-bit 48 kHz digital audio
- Superb multi-generation editing capability
- ±0 frame accurate assemble and insert editing
- Pre-read editing capability
- Broadcast quality variable speed playback from -1 to +3 times (-1 to +2 times with Betacam SX)
- Long record and playback time: 124 minutes using an L cassette and 40 minutes using an S cassette
- Composite and component analogue and SDI inputs and outputs as standard
- 4 analogue and AES/EBU audio inputs and outputs
- UMID reader/writer as standard
- Memory Stick slot for storing operational set up menus

DVW-M2000 + DVW-2000

525/60 Digital Betacam recorders are also available with CE marking for the Europe, Africa and Middle East market.

Please contact your Sony Sales Centre for details.

DVW-2000P

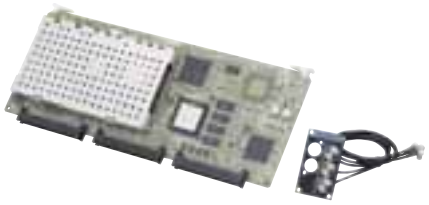
- 4:2:2 component digital VTR
- 625/50 operation
- Digital Betacam recording and playback
- 4 channels of 20-bit 48 kHz digital audio
- Superb multi-generation editing capability
- ±0 frame accurate assemble and insert editing
- Pre-read editing capability
- Broadcast quality variable speed playback from -1 to +3 times
- Long record and playback time: 124 minutes using an L cassette and 40 minutes using an S cassette
- Composite and component analogue and SDI inputs and outputs as standard
- 4 analogue and AES/EBU audio inputs and outputs
- UMID reader/writer as standard
- Memory Stick slot for storing operational set up menus

Optional Accessories

BKDW-101

Control Panel

The BKDW-101 provides additional control of the DVW-M2000P and DVW-2000P from a remote location. It is used with the BKMW-102 Control Panel Case and the BKMW-103 Control Panel Extension Kit. A switch on the front of the recorder allows control to be selected between the remote control panel and the control panel supplied with the recorder. The BKMW-102 and BKMW-103 can also be used to extend the supplied front panel of the recorder. BKMW-103 includes a blanking panel which can be fixed to the front of the recorder in place of the original control panel.



BKMW-104

HD Up-Converter Board

For installation into DVW-M2000P and DVW-2000P Digital Betacam VTRs. Converts 625/50 Betacam, Betacam SP, Betacam SX, MPEG IMX and Digital Betacam material to High Definition 1080/50i, and outputs from the DVW-M2000P via HD-SDI. Converts 625/50 Digital Betacam material to High Definition 1080/50i, and outputs from the DVW-2000P via HD-SDI.

BKMW-103
Control Panel Extension Kit
(Cable length: 10 m)

RMM-131
Rack Mount Kit

BKMW-102
Control Panel Case

Tapes

BCT-D34L/D64L/D94L/D124L
Digital Video Cassettes (Large Cassette)

BCT-D6/D12/D22/D32/D40
Digital Video Cassettes (Small Cassette)

BCT-HD12CL
Cleaning Cassette

(not pictured here)

Compact Players

The J-30 and J-30/SDI are the smallest players of Betacam family cassettes. The design concept of the J-Series was for affordable, compact office viewers to be used by producers, journalists and production staff. The J-30 and J-30/SDI can replay Betacam, Betacam SP, Betacam SX, MPEG IMX and Digital Betacam S-cassettes and L-cassettes. They also have all the features required for viewing and logging, and – although not designed for linear editing applications or on-air use – are ideal for source feeding to servers or non-linear editing systems. The J-30 provides composite and component analogue video outputs, while the J-30/SDI has composite analogue and SDI outputs. Both models have an i.LINK interface for feeding material to DV-based editing applications, and are supplied with an infra-red remote controller. The J-30 and J-30/SDI also have a jog/shuttle dial, 525/625 versatility, simple remote control via RS-422A and audio meters – all packed into their compact size.

J-30
J-30/SDI

- Extremely compact: 307 x 100 x 397 mm (12 ⅛ x 4 x 15 ½ inches) in size and just 8 kg in weight
- i.LINK interface (25 Mb/s DV output, and remote control input via 6-pin IEEE-1394)
- Playback of Betacam, Betacam SP, Betacam SX, MPEG IMX and Digital Betacam cassettes
- Playback of S-cassettes and L-cassettes
- Jog/Shuttle dial with x20 maximum search speed for Digital Betacam cassettes
- Infra-red remote controller
- 525/625 switchable for international operation
- Monitor output of 2 audio channels (selectable on front panel)
- Audio meters for display of the selected 2 channels of audio
- Industry-standard RS-422A control interface for remote feeding into servers and non-linear editors

J-30 only

- Composite analogue and component analogue video outputs

J-30/SDI only

- Composite analogue and 2 SDI outputs (one with superimposed characters)
- Timecode output via BNC connector
- Built-in UMID (Unique Material Identifier) reader
- 4 channels of digital output via SDI (8 channels when replaying MPEG IMX cassettes)

Camcorders Specifications

DVW-970P

GENERAL

Power requirements	DC 12 V +5.0 V/-1.0 V
Power consumption	29 W (with DC 12 V power supply, REC mode, with viewfinder)
Operating temperature	0 to +40 °C (+32 to +104 °F)
Storage temperature	-20 to +60 °C (-4 to +140 °F)
Operating humidity	25 to 85% (relative humidity)
Mass	Approx. 3.7 kg (8 lb 3 oz) Approx. 5.4 kg (11 lb 14 oz) (with viewfinder, microphone, BP-GL95 battery, BCT-D40 tape)
Continuous operating time	Approx. 170 min. with BP-GL95 battery at 25 °C (77 °F), REC mode

SIGNAL INPUTS/OUTPUTS

Genlock video input	BNC type (1), 1.0 Vp-p, 75 Ω
Audio input (CH-1/2)	XLR-3-31 type (2), -60/-50/-40/+4 dBu* selectable, high impedance, balanced
Microphone input	XLR-3-31 type (1), -60/-50/-40 dBu*
Time code input	BNC type (1), 0.5 to 18 Vp-p, 10 kΩ
Analog composite output	BNC type (1), 1.0 Vp-p, 75 Ω
SDI output	BNC type (1), 0.8 Vp-p, 75 Ω (an optional CBK-SD01 is required)
Video test output	BNC type (1), 1.0 Vp-p, 75 Ω
Audio output (CH-1/2)	XLR-5-pin, male (stereo)
Time code output	BNC type (1), 1.0 Vp-p, 75 Ω
Earphone output	Mini-jack (2)
	* 0 dBu=0.775 Vrms.

OTHER INPUTS/OUTPUTS

Lens	12-pin
VF	20-pin
Remote	8-pin
Wireless microphone	D-Sub 15-pin
Light	2-pin, DC 12 V, max. 50 W
DC input	XLR-4-pin, male, DC 11 to 17 V
DC output	4-pin (for wireless microphone receiver), DC 12 V (max. 0.1 A)
Battery terminal	5-pin
Camcorder adaptor	40-pin

VTR SECTION

GENERAL

Recording format	Video	Digital Betacam
	Audio	4 ch/20 bits/48 kHz
Tape speed		96.7 mm/s
Record/Playback time		Max. 40 min. with BCT-D40 cassette
Fast forward time		Approx. 6 min. with BCT-D40 cassette
Rewind time		Approx. 5 min. with BCT-D40 cassette
Recommended Recording Media		Sony Digital Betacam S cassette, BCT-D6/D12/D22/D32/D40 Series
Sampling frequency		Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz
Quantization		10-bit / sample

DIGITAL VIDEO PERFORMANCE

K-factor (2T pulse)	Less than 1 %
Y/C delay	Less than 15 ns

DIGITAL AUDIO PERFORMANCE

Frequency response	20 Hz to 20 kHz, +0.5 dB/-0.8 dB
Dynamic range	More than 85 dB (emphasis ON)
Distortion (at 1 kHz, emphasis ON, reference level)	Less than 0.08 %
Cross talk (at 1 kHz, reference level)	Less than –70 dB
Wow & flutter	Below measurable limit
Head room	20 dB (ex-factory setting)

* The specifications given above were measured via CBK-SD01 SDI Output Bord.

DVW-970P

CAMERA SECTION

Pickup device	3-chip 2/3-inch type Power HAD EX CCD
Aspect ratio	16:9/4:3 switchable
Total picture elements (H x V)	1038 x 1188
Effective picture elements (H x V)	980 x 1164
Optical system	
Spectral system	F1.4 prism (with quarts filter)
Built-in filters	1: Clear, 2: 1/4ND, 3: 1/16ND, 4: 1/64ND, A: CROSS, B: 3200K, C: 4300K, D: 6300K
Lens mount	2/3-inch type Sony bayonet mount
Electrical characteristics	
Scan format	625/50i, 625/25p
A/D conversion	14 bits
Sensitivity	F11 (typical) (2000 lx, 89.9% reflectance)
Minimum illumination	0.008 lx (F1.4 lens, +48 dB gain, with slow shutter mode at 16-frame accumulation)
Smear level	-145 dB (typical)
Video S/N ratio	63 dB (typical)
Vertical resolution	
	480 TV lines (with EVS) and 530 TV lines (without EVS) at 625/50i mode
	575 TV lines at 625/25p mode
Shutter speed	1/60, 1/125, 1/250, 1/500, 1/1000, 1/2000 s at 625/50i mode
	1/33, 1/50, 1/100, 1/125, 1/250, 1/500, 1/1000, 1/2000 s at 625/25p mode
ECS	50 to 6000 Hz at 625/50i mode 25 to 6000 Hz at 625/25p mode
Slow shutter	1/25, 1/12.5, 1/8.3, 1/6.3, 1/5, 1/4.2, 1/3.6, 1/3.1, 1/1.6 s (1 to 8, 16 frames)
Gain selection	-3, 0, 3, 6, 9, 12, 18, 24, 30, 36, 42, 48 dB (for GAIN LOW, GAIN MID, GAIN HIGH and GAIN TURBO positions)
Registration	0.05% (all zones, without lens)
Warm-up time	2 s
Modulation depth at 5 MHz	70% (16:9 typical)/55% (4:3 typical)

VIEWFINDER

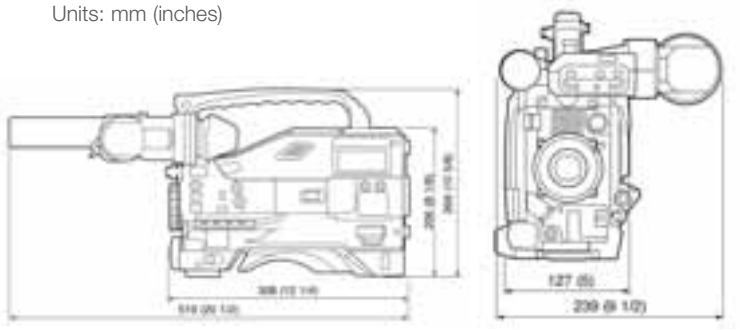
CRT	2.0-inch monochrome
Controls	BRIGHT, CONTRAST, PEAKING, TALLY, ZEBRA, DISPLAY switches
Horizontal resolution	450 TV lines (16:9)/600 TV lines (4:3)
Microphone	Electret condenser microphone (Ultra-directional) (Detachable)

SUPPLIED ACCESSORIES

Operation Manual (x1), Viewfinder (x1), Lens cap (x1), Shoulder belt (x1), Monaural Microphone (x1).

Dimensions

Units: mm (inches)



Studio Recorders Specifications

GENERAL

	DVW-M2000P	DVW-2000P
Power requirements	AC 100 V to 240 V, 50/60 Hz	
Power consumption	220 W	200 W
Operating temperature	+5 °C to +40 °C (+41 °F to +104 °F)	
Storage temperature	-20 °C to +60 °C (-4 °F to +140 °F)	
Humidity	20 % to 90 % (relative humidity)	
Mass	23.5 kg (52 lb 11 oz)	
Dimensions (W x H x D)	427 x 174 x 544 mm (16 ⅞ x 6 ⅞ x 21 ½ inches)	
Tape speed	Digital BETACAM: 96.7 mm/s	
	MPEG IMX: 53.776 mm/s	—
	BETACAM SX: 59.575 mm/s	—
	BETACAM/BETACAM SP: 101.51 mm/s	—
Playback time	Max. 124 min with BCT-D124L cassette	
Fast forward/rewind time	Approx. 3 min with BCT-D124L cassette	
Search speed range	Digital BETACAM: ±50 times normal playback speed	
	MPEG IMX: ±78 times normal playback speed	—
	BETACAM SX: ±78 times normal playback speed	—
	BETACAM/BETACAM SP: ±42 times normal playback speed	—
Servo lock time	0.7 s or less (from standby on)	
Load/unload time	6 s or less	

INPUT/OUTPUT SIGNALS

Analogue composite input	BNC (x2, including one loop through output), 1.0 Vp-p, 75 Ω, sync negative
Analogue composite output	BNC (x3, including one character out), 1.0 Vp-p, 75 Ω, sync negative
Analogue component input	BNC (x3, for 1 set, Y/R-Y/B-Y),Y: 1.0 Vp-p, 75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75 Ω
Analogue component output	BNC (x3, for 1 set, Y/R-Y/B-Y),Y: 1.0 Vp-p, 75 Ω, sync negative, R-Y/B-Y: 0.7 Vp-p, 75 Ω
SDI input	BNC (x2, including one active throughout), SMPTE 259M (ITU-R BT.656-3), 270 Mb/s
SDI output	BNC (x3, including one character out), SMPTE 259M (ITU-R BT.656-3), 270 Mb/s

Recommended Wireless Systems for Camcorder

WRR-862B Receiver | WRR-855B Receiver | WRT-8B Transmitter* | ECM-88BC Lavalier Mic

	WRR-862B Receiver	WRR-855B Receiver	WRT-8B Transmitter*	ECM-88BC Lavalier Mic
UHF operating frequency	Dependent on version / region	Dependent on version / region	Dependent on version / region	no
Frequency response	40 Hz – 18 kHz	100 Hz – 15 kHz	40 Hz – 20 kHz	40 Hz – 20 kHz
Signal to noise	>60 dB A-weighted	>60 dB A-weighted	60 dB or more	
RF Power output	N/A		10/50 mW Switchable	
Current consumption	230 mA	200 mA	6 hours @ 50 mW	
Battery life	5 hours		13 hours @ 10 mW	
Max SPL	N/A			120 dB
Weight	400 g	280 g	140 g incl batteries	1.5 g Capsule
Dimensions W x H x D (mm)	89 x 120 x 29.5	88 x 118 x 31	63 x 83 x 17	3.5 x 3.5 x 12.5 Capsule
Mounting/adaptor brackets required	A8278-057A	CA-WR855, BTA-801 or A8278-057A		
Cable Length	N/A			2.5 m

* Or use WRT-847B Handheld Transmitter with either CU-F780, CU-G780, CU-E700, CU-E672 or CU-F117 Capsule

	DVW-M2000P	DVW-2000P
HD-SDI output (option)	BNC (x3)	
Analogue audio input	XLR (x4) (4CH)	
Analogue audio output	XLR (x4) (4CH)	
Cue audio input	XLR (x1)	
Cue audio output	XLR (x1, only Digital Betacam playback)	
Digital audio input	BNC (x2), 4 channels, AES/EBU, default 48 kHz (32 to 48 kHz with Sample Rate converter), Complies with AES-3id-1995	
Digital audio output	BNC (x4), 8 channels, AES/EBU, 48 kHz fixed, Complies with AES-3id-1995	BNC (x2), 4 channels, AES/EBU, 48 kHz fixed, Complies with AES-3id-1995
Remote control: Remote (RS-422A)	D-sub 9-pin (x2), Sony 9-pin remote interface	
Remote control: RS-232C (ISR*)	D-sub 9-pin (x1), RS-232C interface	
Remote control: Parallel Remote	D-sub 50-pin (x1)	
Remote control: Video control	D-sub 15-pin (x1)	
Remote control: Control Panel	Circular connector 10-pin	
Time code input	XLR (x1)	
Time code output	XLR (x1)	
Memory card insertion slot	"Memory Stick" slot (x1)	
Monitor output L/R	XLR (x2) (channel selectable)	
Phones	JM-60 Stereo phone jack	

PROCESSOR ADJUSTMENT RANGE

Video level	±3 dB/ -∞to 3 dB selectable	
Chroma level	±3 dB/ -∞to 3 dB selectable	
Black level	±210 mV	
Chroma phase	±30°	
System sync phase	±15 µs	
System SC phase	±200 ns	
Y/C delay	±100 ns (BETACAM/BETACAM SP playback only)	—
Composite input level	±3 dB	

DIGITAL VIDEO PERFORMANCE

Sampling frequency	Y: 13.5 MHz, R-Y/B-Y: 6.75 MHz	
Quantization	Digital BETACAM: 10-bit / sample	Digital BETACAM: 10-bit / sample
Error correction	Reed-Solomon code	
Digital input to analogue component output	D/A quantization: 10-bit / sample Bandwidth: Y: 0 to 5.75 MHz +0.5/-2.0 dB, R-Y/B-Y: 0 to 2.75 MHz +0.5/-2.0 dB S/N ratio: 62 dB or more, K-factor (2T pulse): 1% or less	
Analogue component input to analogue component output	A/D and D/A quantization: 10-bit / sample Bandwidth: Y: 0 to 5.75 MHz +0.5/-2.0 dB, R-Y/B-Y: 0 to 2.75 MHz +0.5/-2.0 dB S/N ratio: 56 dB or more, K-factor (2T pulse): 1% or less, LF non-linearity: 3% or less	
Analogue composite input to analogue composite output	A/D and D/A quantization: 10-bit / sample Bandwidth: 0 to 5.75 MHz +0.5/-2.0 dB S/N ratio: 56 dB or more, Differential gain: 2% or less, Differential phase: 2° or less Y/C delay: 20 ns or less, K-factor (2T pulse): 1% or less	

DIGITAL AUDIO PERFORMANCE

Sampling frequency	48 kHz (synchronised with video)	
Quantization: Digital BETACAM	20-bit / sample	
Analogue input to analogue output	Frequency response (0 dB at 1kHz): 20 Hz to 20 kHz +0.5/-1.0 dB Dynamic range (at 1 kHz, emphasis ON): More than 95 dB Distortion (at 1 kHz, emphasis ON, reference level): Less than 0.05% Cross talk (at 1 kHz, between any two channels): Less than -80 dB Wow & flutter: Below measurable level	
Head room	20 dB (18 dB selectable)	
Emphasis (ON/OFF selectable in REC mode)	T1=50 µs, T2=15 µs	

SUPPLIED ACCESSORIES

	PSW 4x16 Rack Mount Screw (x4), Operation manual (x1), Installation manual (x1)

* ISR: Interactive Status Reporting

Compact Players Specifications

GENERAL

		J-30	J-30/SDI
Power requirements		AC 100 V to 240 V, 50/60 Hz	AC 100 V to 240 V, 50/60 Hz
Power consumption		55 W	55 W
Operating temperature		+5 °C to +40 °C (+41 °F to + 104 °F)	+5 °C to +40 °C (+41 °F to + 104 °F)
Storage temperature		-20 °C to +60 °C (-4 °F to + 140 °F)	-20 °C to +60 °C (-4 °F to + 140 °F)
Humidity		25% to 80% (relative humidity)	25% to 80% (relative humidity)
Mass		8.2 kg (18 lb 1 oz)	8.2 kg (18 lb 1 oz)
Dimensions (W x H x D)		307 x 100 x 397 mm (12 ⅛ x 4 x 15 ¾ inches)	307 x 100 x 397 mm (12 ⅛ x 4 x 15 ¾ inches)
Tape speed	Digital Betacam	96.7 mm/s	96.7 mm/s
	MPEG IMX	64.467 mm/s (525 mode), 53.776 mm/s (625 mode)	64.467 mm/s (525 mode), 53.776 mm/s (625 mode)
	Betacam SX	59.515 mm (525 mode), 59.575 mm (626 mode)	59.515 mm (525 mode), 59.575 mm (626 mode)
	Betacam/ Betacam SP	118.6 mm/s (525 mode), 101.5 mm/s (625 mode)	118.6 mm/s (525 mode), 101.5 mm/s (625 mode)
Playback time	Digital Betacam	Max. 124 min. with BCT-D124L	Max. 124 min. with BCT-D124L
	MPEG IMX	Max. 184 min. (525 mode)/220 min. (625 mode) with BCT-184MXL	Max. 184 min. (525 mode)/220 min. (625 mode) with BCT-184MXL
	Betacam SX	Max. 194 min. with BCT-194SXLA	Max. 194 min. with BCT-194SXLA
	Betacam/ Betacam SP	Max. 90 min. (525 mode)/108 min. (625 mode) with BCT-90MLA	Max. 90 min. (525 mode)/108 min. (625 mode) with BCT-90MLA
Fast forward/ rewind time	Digital Betacam	Approx. 5 min. with BCT-D124L	Approx. 5 min. with BCT-D124L
	MPEG IMX	Approx. 5 min. with BCT-184MXL	Approx. 5 min. with BCT-184MXL
	Betacam SX	Approx. 5 min. with BCT-194SXLA	Approx. 5 min. with BCT-194SXLA
	Betacam/ Betacam SP	Approx. 5 min. with BCT-90MLA	Approx. 5 min. with BCT-90MLA
Search speed range	Digital Betacam	±20 times normal playback speed	±20 times normal playback speed
	MPEG IMX	±32 times normal playback speed	±32 times normal playback speed
	Betacam SX	±35 times normal playback speed	±35 times normal playback speed
	Betacam/ Betacam SP	±18 times (525 mode), ±20 times (625 mode) normal playback speed	±18 times (525 mode), ±20 times (625 mode) normal playback speed
Servo lock time		1.5 s or less (from standby on)	1.5 s or less (from standby on)
Load/unload time		9 s or less	9 s or less

INPUT SIGNAL

Ext. sync		BNC (x 1), Frame lock	BNC (x 1), Frame lock

OUTPUT SIGNALS

Analogue composite output	BNC (x 1), RCA Phono (x1), 1.0 Vp-p, 75 Ω	BNC (x 1), RCA Phono (x1), 1.0 Vp-p, 75 Ω
S-video output	Mini DIN 4-pin (x 1), Y: 1.0 Vp-p, C: 0.286 Vp-p burst, 75 Ω	Mini DIN 4-pin (x 1), Y: 1.0 Vp-p, C: 0.286 Vp-p burst, 75 Ω
Analogue component output	BNC (x 3), Y: 1.0 Vp-p, R-Y/B-Y: 0.7 Vp-p, 75 Ω	—
SDI output	—	BNC (x 2), SMPTE 259M, 270 Mb/s, 0.8 Vp-p, 75 Ω
i.LINK (DV output)	6-pin (x1), IEEE 1394	6-pin (x1), IEEE 1394
Time Code output	—	BNC(x1), 1.0Vp-p, 75 Ω, unbalanced
Monitor output L/R	RCA Phono (x 2): -10 dBu at 47K Ω load, unbalanced, XLR (male x 2): +4 dBm, 600 Ω load, low impedance, balanced	RCA Phono (x 2): -10 dBu at 47K Ω load, unbalanced, XLR (male x 2): +4 dBm, 600 Ω load, low impedance, balanced
Headphone output	JM-60 Stereo Phone Jack, -∞to -12 dBu at 8 Ω load, unbalanced	JM-60 Stereo Phone Jack, -∞to -12 dBu at 8 Ω load, unbalanced

REMOTE CONTROL

RS-422A	D-sub 9-pin (female) (x 1), Sony 9-pin remote interface	D-sub 9-pin (female) (x 1), Sony 9-pin remote interface
RS-232C	D-sub 9-pin (male) (x 1)	D-sub 9-pin (male) (x 1)
Wireless	SIRCS	SIRCS

SUPPLIED ACCESSORIES

	Operation manual (CD-ROM), Operation manual, vertical stand (x 2), Infra-red remote controller	Operation manual (CD-ROM), Operation manual, vertical stand (x 2), Infra-red remote controller

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